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GSM/GPRS/GPS Tracker User Manual

Preface

Thank you for purchasing the tracker. This manual shows how to operate the device smoothly and correctly. Make sure to read this manual carefully before using this product. Please note that specification and information are subject to changes without prior notice in this manual. Any change will be integrated in the latest release. The manufacturer assumes no responsibility for any errors or omissions in this document.

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1. Summary

Working based on existing GSM/GPRS network and GPS satellites, easy to hidden with internal GSM and GPS antenna, this product can locate and monitor any remote targets by SMS or internet.

2. Applications

Specially designed for bicycle anti-thief and tracking.

3. Hardware Description

4. Accessories

No.	Picture	Name	Specs
1		Charger	Input: AC110～240V Output: 3.7V／380mA
2		Cylindrical Li-ion battery	16340/700MA
3		Inductive key	
4		Matching screw	M6

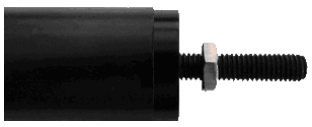
5. Specifications

Content	Specs
DIM	23.5×110mm
Weight	50g
Network	GSM/GPRS
Band	850/900/1800/1900Mhz
GPS sensitivity	-159dBm
GPS Accuracy	5m
GPS start time	Cold status 45s Warm status 35s Hot status 1s
Charger Voltage	110－240V input 3.7V output
Battery	Chargeable changeable 3.7V 700mAh Polymer battery
Standby time	30 Days
Storage Temp	-40℃ to +85℃
Operation Temp.	-20℃ to +70℃
Humidity	5%--95% non-condensing

6. Installation

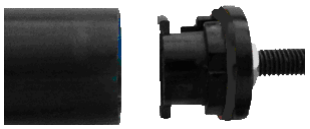
6.1. SIM CARD Installations

6.1.1 Unscrew the nut at the bottom of the plastic tube about 5mm.

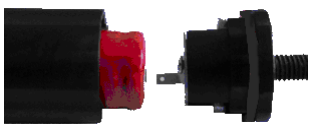


6.1.2 Push sealing cap to nut position, and put the sealing cap and tube in a boundary separation.

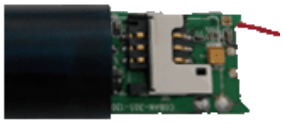
6.1.3 Rotate the sealing cap and nut at the same time to open it.



6.1.4 Remove the lithium battery and make sure the batteries are fully charged before use.



6.1.5 Slightly pull out the PCB board tills the SIM Card slot shows up.



6.1.6 Insert SIM, and then reload the batteries, connected to the battery positive cable, please be careful with the battery installation directions.

6.2. Installation

6.2.1Please first check the diameter and length of your bicycle's head tube to make sure the tracker can fit in well. Diameter of tracker is 23.5mm, and length is 110mm.

6.2.2 Position the nut of the M6 matching Screw, to match the nut and tracker device.

6.2.3 Rotating the M6 matching screw into the bicycle's head tube and fix it, then wedging M6 screw fully into the head tube with a hammer.

6.2.4 Remove M6 screw and load the tracker.

7. Operation instructions

7.1. Working mode

7.1.1 Bicycle mode1(default mode)

Send SMS command to tracker device "sleep+password+space+bicycle2", tracker will reply "sleep bicycle 2 ok". In case of no operation in 5 minutes, tracker will enter low power

consumption mode, GSM、GPS、LED shut off. Neither SMS nor Calling can awake tracker device. Tracker will only be awakened by shock under ARM state.

7.1.2 Bicycle mode 2

Send SMS command to tracker device " sleep+password+space+bicycle1" , tracker will reply "sleep bicycle 1 ok".In case of no operation in 5 minutes, tracker will enter low power consumption mode , GSM、GPS、LED shut off .Neither SMS nor Calling can awake tracker device. Tracker device will be awaken by shock and send message under both ARM and DISARM state.

7.1.3 Ordinary mode

Send SMS command to tracker device "sleep+password+space+shock", tracker will reply" sleep shock ok". It will enter sleep mode if no shock is detected. GPS、LED shut off. SMS、Calling、Shock can awake the tracker .

7.2. Operate the tracker

7.2.1 Bicycle mode1 is the default mode.

7.2.2 Operate the tracker device in open area.

7.2.3 Place the Induction key over the tracker device, indicator will be on. Remove the key after 3 seconds. LED indicator flashes fast, tracker works under ARM state. LED indicator slowly, tracker works under DISARM state.

7.2.4 If shock is detected under ARM state, tracker will be awaken and work for 5 minutes.

7.2.5 Tracker stop working under DISARM state.

7.2.6 Only when the tracker is working, we can do following SMS operations.

7.3. Initialization

Send "begin+password" in SMS to the unit, it will reply "begin ok" and initialize all the settings. (Default password: 123456)
For example, send SMS " begin123456" to the tracker , If succeeded, tracker will reply "begin ok".

7.4. Change the password

7.4.1 Set Password: Send sms: “password+old password+space+new password” to the unit to change the password.
For example, send sms: “password123456 888888” to terminal device, it will reply sms: “password OK”. New password 888888 changed in success.

7.4.2 Be sure keep the new password in mind, you have to upload the software to restore the original setting in case of losing the new password.

7.4.3 Make sure the new password is in 6 digits Arabic numbers, or the tracker can not recognize the password.

7.4.4 Make sure that all the symbol “+” in sms commends is just for quick understanding, which don’t need to enter “+” in sms, and “space” means press the spacebar button of the cell phone.

7.5. Authorization

There are 5 numbers to be allowed to authorize in the tracker at most, be sure to set the authorization phone number before use.

7.5.1 Call and track the tracker device for 10 times from cell phone in success, it will make the cell phone number as the authorized number automatically

7.5.2 Authorization: Send SMS “admin+password+space+cell phone number” to set up an authorized number, the other authorized numbers should be set by the first authorized number, if the number is successfully authorized, the unit will reply“admin OK” by SMS.

7.5.3 Delete authorization: Send SMS “noadmin+password+space+authorized number” to delete the authorized number.

7.5.4 If you want to track the target tracker device when it enters into another country, you must add the country code before the cell phone number, for example, send SMS “admin123456 008613322221111” to the device. Note: 13322221111 will be set up as the authorized number.

7.6. Scheduled wake-up

Send SMS command”schedule+password+space+7d”to GPS unit, tracker will wake up each 7days and report location (m: minute, h: hour, d: day) the maximum interval at most is 3digital
Cancel scheduled wake-up: After wake up, send sms”nonschedule+password”, this function can be canceled

7.7. Single Locating

7.7.1 Any number call the tracker device, it will reply a SMS including the position of latitude

and longitude if don't set up the authorized number. If authorized number has set successfully, the device won't reply SMS including the positioning of latitude and longitude when the unauthorized number dials up it.

7.7.2 Dialing the tracker device from the authorized number, it will hang up your calling and respond to a real-time latitude and longitude information as following:

* Tracking location, when no GPS signal, the SMS includes the last valid latitude & longitude as well as the LAC code of current position, the LAC code can be input in the column of "manual track" menu of web platform to check location.

7.8. Auto track continuously

7.8.1 Track with limited times upon time interval:

Send SMS command "fix030s005n +password" to the tracker device, it will report the latitude & longitude at intervals of 30 seconds for 5 times. (s:second, m:minute, h:hour). This command set must be in 3 digits and the maximum value is 255.

7.8.2 Track with unlimited times upon time interval:

Send SMS "fix030s***n+password" to the tracker device, it will reply the latitude & longitude continuously at interval of 30 seconds.

Note: the interval must not less than 20s.

7.8.3 Smart track upon time and distance interval:

Please set "track with unlimited times upon time interval" before this function, and send "distance+password+space+distance", tracker will reply "Distance ok", and then tracker will locate upon both the pre-set time and distance.

E.G: Send "distance123456 0050", it means distance is 50 meters; the number must be 4 digits Arabic numbers.

Set this function on web server: Set time interval first and then distance interval, tracker will locate upon the time and distance.

7.8.4 Cancel: Send SMS "nofix+password" to the tracker device to cancel the "auto track".

7.9. Location based service (LBS)

When the tracker device doesn't receive valid GPS signals, tracker will position by location based service(LBS), the messages includes the GPS coordinates of the last position in SMS mode, but the LAC in message is the current new position, the location can be seen by input the LAC code in the menu "Manual Track" of web platform www.gpstrackerxy.com, you can also send command "address+password" to tracker to get the newest absolute address and GPS coordinates as well; tracker will automatically switch to track by location based service in GPRS mode, and actualized on the map of web server with LBS mark. And there may be some inaccuracy with actual location by LBS tracking; the bias depends on GSM reception.
Note: This feature can be used normally in most areas according to the signal of GSM network. It may not be available in some areas.

7.10.Absolute street address by SMS

7.10.1 You must set up the APN of your local GSM network for the SIM card in tracker first before using this function, if there is user name and password for GPRS login, Please refer to 7.24.1 and 7.24.2 to configure the APN, user name and password for GPRS login.

7.10.2 After configure the APN, send "address+password" to device, it will reply SMS including real street/address name. For example: No.113, Guankou 2nd Rd, Nantou, Nanshan district, Shenzhen, Guangdong, china.

7.11.Arm/Disarm

7.11 Arm/Disarm

7.11.1 Arm Send SMS command "arm+password" to the tracker device, the bike enter armed state, and It will reply "Tracker is activated".

7.11.2 Disarm

Send SMS command "disarm + password" to the tracker device. If the bike is in disarm mode, no action and reply "Tracker is deactivated". If the bike is in arm mode, then switch into disarm mode, and reply" deactivated.

7.12.Shock Alarm

In arm mode, tracker open automatically shock alarm. When device detects vibrations, it awake and send SMS "Sensor alarm+lat/long" to the authorized number. Disarm can close shock alarm.
First level: Alarm will be triggered after detect once slight vibration, send command" sensitivity+password+space+1" .
Second level: Alarm will be triggered after detect 8 times vibration in 2 seconds, send

command" sensitivity+password+space+2".
Third level: Alarm will be triggered after detect 25 times vibration in 5 seconds, send command" sensitivity+password+space+3"

7.13.Geo-fence

Set up a geo-fence for the unit to restrict its movements within a district. The unit will send the message to the authorized numbers when it breach the district.

7.13.1 Set up: When the unit stays immobile in a place for 3-10 minutes, the user can Send SMS: "stockade+password+space+latitude,longitude; latitude,longitude" to unit to set the restricted district. In case of breach, it will send SMS "stockade!+geo-info" to the authorized numbers.
Remark: The first latitude&longitude is coordinate of the top left corner of the Geo-fence, while the second latitude&longitude is the coordinate of the bottom right corner.

7.13.2 Cancel: Send SMS:" nostockade+password" to deactivate this function.

7.14.Movement Alarm

7.14.1 Set up: when the unit stays immobile in a place for 3-10 minutes with GPS signal reception, the user can send SMS"move+password+space+0200" to the tracker (Suppose area of a radius of 200 meters, it supports 4 digits at most. Unit: Meter). It will reply "move OK". In case of such a movement (the default distance is 200m), it will send SMS "Move+ latitude & longitude" to the authorized numbers at 3 minutes interval.

7.14.2 Cancel: Send SMS "nomove+password" to deactivate the movement alarm.

7.15.Over speed

7.15.1 Set up: Send SMS: "speed+password+space+080" to the unit (suppose the speed is 80km/h), and it will reply "speed ok!". When the target moves exceeding 80 km/h, the unit will send SMS : "speed+080!+Geo-info" to the authorized numbers every 3 minutes.

7.15.2 Cancel: Send SMS "nospeed+password" to deactivate the overspeed alarm.
Remark: The recommended speed should be not less than 50km/h. For below that rate, it will be effected the accuracy by gps signals drift etc.

7.16.Low battery alert

7.16.1 Send SMS "lowbattery+password+space+on", it will send SMS "low battery+latitude/longitude" to authorized numbers 2 times in total in 15 minutes interval when voltage of battery is going to be about 3.55V.

7.16.2 This function activates as default, send SMS “lowbattery+password+space+off” to deactivate

7.17.Forward the third parties’ message

Send SMS "forward+password+space+third parties phone number" from authorized phone number, tracker will reply "forward ok", and supports 1 third parties phone numbers at most.
For example, set the phone number of the service provider of the simcard in the tracker, when charge remind message coming in, tracker will forward it to authorized phone number.
Cancel: Send SMS command "noforward+password".

7.18.Charges Inquiry

Function: Send SMS command “balance+password+space+carrier’s phone number+space+code" to tracker, it will forward the code to the carrier’s phone number and return the message from the carrier’s phone number.

How it works: After received balance command from cell phone, it will remember this cell phone number and pickup the carrier’s phone number & code, then tracker will automatically send the code to carrier’s phone number and forward the message get from carrier’s phone number to the cell phone number which it remembered.

7.19.State Checking

Send SMS:”check+password” to the tracker device, it will reply its current status as: GSM: 100% GPS: OK/NO GPRS: ON/OFF battery: 100%.

7.20.IMEI checking

Send SMS command "imei+password" to the unit. E.g.: Send SMS command "imei123456" to the unit, an IMEI number in 15 digits will be replied to your cell phone.

7.21.Terminal (local) Time Setting

Send SMS “time+space+zone+password+space+local time zone”.
For example, Send SMS “time zone123456 8” (time zone of China).
If the local time zone is negative as “-8”, then it should set as SMS:
“time zone123456 -8”.

7.22.TCP/UDP Switch

Command: "gprs+password,0,0" TCP with keep alive data, this is the default mode.
Command: "gprs+password,1,0" TCP without keep alive data
Command: "gprs+password,0,1" UDP with keep alive data
Command: "gprs+password,1,1" UDP without keep alive data

7.23.Reset

Send SMS “reset+password” to tracker, it will reply “ reset ok”, the GSM and GPS module of the tracker will be reset.

7.24.GPRS setting

User must send SMS via cell phone to set up APN,IP and port before starting GPRS

7.24.1Setting up APN

7.24.1.1 APN standards for Access Point Name and differs from country to country. For more information about the local APN, inquire with your local GPRS network operator.
7.24.1.2 Text the tracker a SMS “APN+password + Space + your local APN” via a cell phone and if succeeded in setup, the tracker will return the message “APN OK”.
7.24.1.3 e.g. send SMS command “APN123456 CMNET”. If succeeded, “APN OK” is returned by the tracker in SMS.
Notes: 123456 refer to password of tracker and CMNET is the APN of China Mobile (One of GSM Operator in china).

7.24.2 GPRS User ID and password Setup

7.24.2.1 In most countries, the user name and password involving GPRS login are not compulsorily necessary, therefore, the entry can be skipped. For those countries requiring user name and password, please configure as following:
7.24.2.2 Send SMS “up+password+space+user+space+password”If succeeded, “user,password ok” is returned by the tracker in SMS.
7.24.3.For instance, send SMS “up123456 jonnes 666666” to the tracker, and if succeeded, the tracker returns “user, password OK”
Note: 123456 is tracker device password, jonnes is the user name for GPRS login, 666666 is the password for GPRS login.

7.24.3 IP and port setup

7.24.3.1 Send SMS as below via a cell phone: adminip +password + Space + IP Address + Space + Port Number. If succeeded, “adminip OK” is returned by the device in SMS.

7.24.3.2 e.g, Send SMS command “adminip123456 202.104.150.75 9000” to the tracker device, If succeeded, “adminip OK” is returned by the device in SMS.(123456 is default password，202.104.150.75 is IP，9000 is port).

7.25.Modes switch between “SMS” and “GPRS”

7.25.1 The default mode is “SMS”
7.25.2 Send SMS “GPRS+password” to the unit, and it will reply “GPRS ok!” and switch to “GPRS” mode.
7.25.3 Send SMS “SMS+password” to the unit, it will reply “SMS ok!” and restore to “SMS” mode.

7.26. Web platform and PC installation tracking software

7.26.1 Web based platform www.gpstrackerxy.com. Configuration IP: 202.104.150.75 Port: 9000. Please check “software platform user manual” included in the CD for detailed operation information.
7.26.2 PC based installation tracking software included in the CD in package.

8 .Cautions

Please comply with the instructions to extend the unit life:
1. Keep the unit dry. Any liquid, i.e. rain, moisture, may destroy or damage the inside circuitry.
2. Don’t use & store the unit in dusty places.
3. Don’t put the unit in overheated or overcooled places.
4. Handle carefully. Don’t vibrate or shake it violently.
5. Don’t disassemble or refit the unit.
6. Please refer to the user manual before using the unit.

9 Faults & The solutions

Faults	Solution
Fail to turn on	Check the battery and see if it is charged.
No GSM Signal	Please make sure SIM Card is GSM Network and installed correctly, also call display should be on; no call transfer and PIN code off. Check whether the power supply voltage is normal

No GPS Signal	A more open view of the sky is recommended to make sure the device can receive the GPS signal normally.
SMS reply fail	Password incorrect or wrong sms commands format
Call without SMS reply or cannot receive alarm SMS	Authorized number is wrong or authorized number has not setup